



United States Department of the Interior

BUREAU OF LAND MANAGEMENT
SALT LAKE DISTRICT OFFICE
2370 South 2300 West
Salt Lake City, Utah 84119

DOE/045/028

IN REPLY REFER TO:

3809

U27-84-03N

(U-027)

DOGM
MINERALS PROGRAM
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JUN 12 1991

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JUN 13 1991

DIVISION OF
OIL GAS & MINING

Dave Rupp
Utah Department of Health
Bureau of Water Pollution Control
288 North 1460 West
Salt Lake City, Utah 84116

Dear Mr. Rupp,

The Timberline heap leach was sampled on April 9, 1991. Four equally spaced auger samples were collected. The holes were 3 feet deep with samples collected from the interval between 2 and 3 feet. The liner was drilled through in two of the samples at a depth of about three feet.

In order to have a comparison with past sampling, the samples were analyzed for total and WAD cyanide in the material along with a meteoric water test on splits of the four samples. Certificates of analyses are enclosed. The average WAD concentration in the material is 2.06 mg/Kg and average total CN is 8.46 mg/Kg. Results of sampling in March 1990 were 12.48 and 27.6 mg/Kg WAD and total CN respectively.

The average WAD cyanide concentration is approaching the Bureau of Water Pollution Control standard of 1 mg/L WAD cyanide (assuming that mg/Kg=mg/L) expressed in your correspondence dated August 29, 1989. Total cyanide is considerably above the 2 mg/Kg standard; however, total cyanide includes stable non-toxic forms of cyanide which present little or no environmental hazard.

Results of the meteoric water mobility test are difficult to interpret. Samples TL-2 and 4 are quite low in WAD cyanide. WAD cyanide concentration in the meteoric water sample TL-1 is higher than the WAD cyanide levels in the material, most likely illustrating cyanide analytical limits. It appears that the

meteoric water mobility test is a "worst case" analysis in that the procedure is quite effective in removing cyanide species from the material.

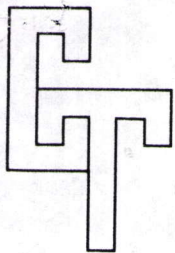
In conclusion, it should be noted that the WAD cyanide levels have been reduced from 140 mg/Kg to an average of 2 mg/Kg. The water table is about 300 feet deep at the mill site and there is little surface runoff in the area; therefore, groundwater contamination at this site is unlikely. There is no ponding of water on the mill site. The mill site was recontoured and seeded in the fall of 1990. The spring rains resulted in good seed germination. It is requested that the sampling be discontinued and the site closure be approved. We are aware that the BLM is still responsible for any future cleanup needs; however, the environmental hazards posed by the Timberline mill site are minimal and we do not believe additional sampling is warranted. If you have any questions, please contact Steve Brooks. Your timely response to my request would be appreciated.

Sincerely,

DEANE H. ZELLER

Deane H. Zeller
District Manager

cc: Myron Bateman, Tooele County Health Dept.
Division of Oil, Gas and Mining



CHEMTECH

ANALYTICAL LABORATORY

6100 S. STRATLER
MURRAY, UTAH 84107
PHONE: (801) 262-7299
FAX: (801) 262-7378

DATE: 4-14-91

TO: Bureau of Land Management
2370 So. 2300 W.
Salt Lake City, Utah 84119

DATE SUBMITTED: 4-10-91 - Timberline

CERTIFICATE OF ANALYSIS

SAMPLE ID:
LAB:

TL-1
U062150

TL-2
U062151

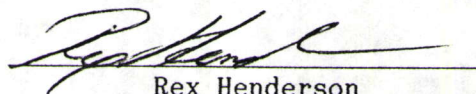
PARAMETER

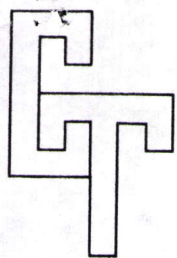
Cyanide as CN-T, mg/Kg	8.55	7.50
WAD Cyanide as CN, mg/Kg	1.80	1.16
Meteoric Water Mobility Procedure: CN, mg/Kg	2.91	0.16
% Moisture	4.0	3.7

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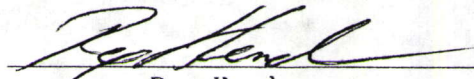
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CERTIFICATE OF ANALYSIS

SAMPLE ID:	TL-3	TL-4
LAB:	<u>U062152</u>	<u>U062153</u>
<u>PARAMETER</u>		
Cyanide as CN-T, mg/Kg	7.39	10.41
WAD Cyanide as CN, mg/Kg	3.13	2.18
Meteoric Water Mobility Procedure: CN, mg/Kg	1.33	<.05
% Moisture	3.7	5.2


Rex Henderson